

Equilateral Polygons

All sides are equal

Equiangular Polygons

All angles are equal

Regular Polygon

Equilateral & Equiangular

Theorem 6-1

The sum of the angles of an n -gon (n -sided polygon) is $(n-2)(180)$

Any Polygon

Triangle $(3-2)(180) = 180 / 3 = 60$ angleQuadrangle $(4-2)(180) = 360 / 4 = 90$ angle100 sided $(100-2)(180) = (98)(180) = 17,640$ Corollary

The measure of each angle of an n -sided polygon is $\frac{(n-2)(180)}{n}$

Regular Polygons

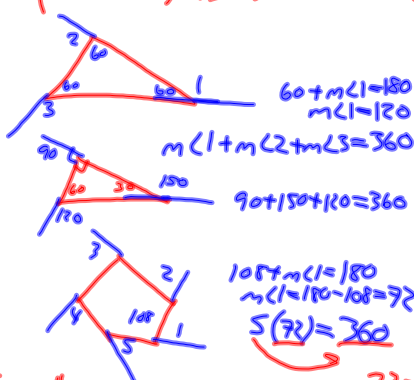
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Theorem 6-2

Sum exterior angles (one per vertex) is 360°

Any Polygon

Corollary

For a regular n -sided polygon each angle has to measure $\frac{360}{n}$

Regular Polygon

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The sum of the interior angles

Sum = $(n-2)(180)$

Sum = $(5-2)(180) = 540$

Angles = $\frac{(n-2)(180)}{n} = \frac{540}{5} = 108$

Equi. Equiang. Regular Polygon

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